

IMPROVING VIETNAM'S ELECTRONIC EVIDENCE LAW IN THE INDUSTRY**4.0 ERA: EXPERIENCE FROM CHINA | MELHORANDO A LEI DE PROVAS ELETRÔNICAS DO VIETNÃ NA ERA DA INDÚSTRIA 4.0: EXPERIÊNCIA DA CHINA**

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ABSTRACT | This paper reviews the current legal framework for electronic evidence in civil litigation in Vietnam and assesses whether such changes are sufficient to meet the demand of the Industry 4.0 era. The paper finds that despite major changes in Vietnam's civil litigation and the increased adoption of electronic evidence, the current legal framework has not been able to keep up with the new context, even with the new Law on Electronic Transactions 2023. As a result, Vietnamese courts and litigants encounter numerous challenges in dealing with this new form of evidence. This paper identifies these challenges through analysis of the legislation and court decisions and makes recommendations for Vietnam based on China's experience.

KEYWORDS | Civil litigation. Electronic evidence. Industry 4.0. Vietnam. China.

RESUMO | Este artigo revisa o atual enquadramento jurídico para provas eletrônicas em litígio civil no Vietnã e avalia se tais mudanças são suficientes para satisfazer a procura da era da Indústria 4.0. O estudo realizado paor esse artigo sugere que, apesar das grandes mudanças na legislação sobre prova eletrônica no Vietnã e do aumento do uso de prova eletrônica judicial, o atual enquadramento jurídico não tem conseguido acompanhar o novo contexto, mesmo com a mais recente Lei de Transações Eletrônicas de 2023. Como resultado, os tribunais e litigantes vietnamitas enfrentam numerosos desafios em lidar com provas eletrônicas. Este trabalho identifica novos desafios através da análise da legislação e das decisões judiciais; e faz recomendações para o Vietnã com base na experiência da China.

PALAVRAS-CHAVE | Litígio civil. Provas eletrônicas. Indústria 4.0. Vietnã. China.

1. INTRODUCTION

Vietnam is a fast-growing economy that plays an increasingly important role in Southeast Asia. Since 1986, when the country launched an open policy to transition from a centrally planned economy to a market economy, Vietnam has witnessed remarkable economic growth. Similar to other countries in the world, Vietnam is entering the digital age with a boom in electronic commerce. With the number of Internet users reaching 72 million out of nearly 100 million people, Vietnam is currently among the 15 “biggest” countries in cyberspace. Mobile broadband infrastructure has reached 99.73 percent of villages nationwide. Vietnam also has 94.2 million smartphone users and 82.2 million mobile broadband subscribers, accounting for 74.3 percent of the population (VIETNAM MINISTRY OF INFORMATION AND COMMUNICATION, 2022). As a result, more disputes involving electronic evidence are brought to Vietnamese courts. In 2019, the Politburo of the Communist Party of Vietnam issued Resolution 52-NQ/TW laying out major policies and directions on active participation in the Fourth Industrial Revolution (Industry 4.0). Based on this Resolution, Vietnam has been making efforts to improve its entire legal system to meet the demands of the Industry 4.0 era in different areas of law, including both substantive law (civil law, commercial law, intellectual property law, etc.) and procedural law, especially evidence law. However, these efforts have been rather slow, and in the field of evidence law there remain a number of gaps. Particularly, the legal framework for electronic evidence in Vietnam is incomplete and has not kept up with recent changes. This leads to major challenges for judges when dealing with civil cases concerning electronic evidence. While in criminal cases a court can rely on a team of experienced, well-trained investigators and technical experts to collect, preserve, and produce electronic evidence, in civil cases, the parties are who bear the burden of proof. Without the assistance of lawyers and technical experts, it becomes highly burdensome for litigants to produce electronic evidence and establish or rebut such evidence's authenticity. In those circumstances, the parties often request the court to collect evidence, such as issuing a decision to request

expert examination, but this is not always helpful, as seen in subsequent parts of this article.

While electronic evidence nowadays is becoming more common in civil litigation in Vietnam, due to its complexity and the lack of technical understanding by Vietnamese legal scholars, only a few researchers have addressed the topic of electronic evidence in civil litigation. In fact, electronic evidence is often studied in the context of criminal proceedings rather than in civil litigation, except for a recently published monograph, which examines electronic evidence in civil and commercial dispute resolution from a comparative perspective of UNCITRAL, the European Union, Germany, and Vietnam (TRAN, 2022). The current literature on electronic evidence in Vietnam is limited to analysis of Vietnam's legal framework for electronic evidence based on legal texts and regulations, without examining relevant judicial decisions. Moreover, it has not updated to the most recent development of Vietnamese law with the new Law on Electronic Transactions, which was passed by Vietnam's National Assembly (the legislature) in June 2023 and came into effect in January 2024. This article aims to fill in the research gap by addressing two questions: (1) what is the latest development of the legal framework for electronic evidence in civil litigation in Vietnam, and (2) is it sufficient to meet the demand of Industry 4.0, and [if not,] how to improve it? After the introduction, the article proceeds to provide some theoretical background on electronic evidence. Next, the author traces the development of electronic evidence legislation in Vietnam and examines a number of Vietnamese court decisions in recent years that address the authenticity and evidentiary value of electronic evidence in order to illustrate the challenges faced by both the court and the litigants. Finally, China's recent progress in modernizing its electronic evidence law is explored, and several recommendations for Vietnam are made based on China's experience.

2. BACKGROUNDS ON ELECTRONIC EVIDENCE

Before delving into Vietnam's electronic evidence law, it is necessary to lay out some theoretical background on electronic evidence. Therefore, in this Part, the author analyzes the concept of electronic evidence and identifies the characteristics of electronic evidence in comparison with traditional types of evidence. The characteristics of electronic evidence are of great importance from a legal perspective because they determine how the law should regulate electronic evidence.

2.1. Concept of electronic evidence

Digital technology has given rise to a new type of evidence that plays an increasingly important role in resolving today's civil disputes: electronic evidence. According to the Guidelines on Electronic Evidence in Civil and Administrative Proceedings adopted by the Committee of Ministers of the Council of Europe on 30 January 2019, "electronic evidence means any evidence derived from data contained in or produced by any device, the functioning of which depends on a software program or data stored on or transmitted over a computer system or network." (COUNCIL OF EUROPE, 2019, p. 6). According to Mason and Seng (2017, p. 19) electronic evidence is "data (comprising the output of analogue devices or data in digital form) that is manipulated, stored, or communicated by any manufactured device, computer or computer system or transmitted over a communication system," that has the potential to prove a fact.

In Vietnam, electronic evidence in civil proceedings is understood as real data contained or created by any device whose function depends on a software program or data stored on the device or transmitted through a computer system or network, collected according to the procedure prescribed by the Code of Civil Procedure (CPC) and used by the court as a basis to resolve civil cases (NGUYEN, 2019, p. 39). Electronic evidence is produced

and submitted by the parties (litigants) to the Court or collected by the Court or competent authority to prove the litigants' claims during the course of civil proceedings. Under Vietnamese law, electronic data is considered evidence when it satisfies three properties of evidence: objectivity, relevance, and legality.

Electronic data is very diverse in form. It can be: (i) information published on online platforms such as webpages and blogs; (ii) messages transmitted through network communication applications such as mobile phone text messages, emails, instant messages, group chat messages; (iii) user information, e-transaction records, communication records, login logs; (iv) electronic documents such as text files, images, audio and video records, digital certificates, etc., as well as any other information stored, processed or transmitted in a digital form which can prove the facts of a case¹.

2.2. Characteristics of electronic evidence

Electronic evidence has the following five notable characteristics that require specific regulations:

First, electronic evidence is a type of non-traditional evidence, which is digitized characters stored in media, electronic devices, or on the global information network. Through processing, it will generate data including numbers, letters, sounds, images, etc., thereby providing information related to the facts that need to be proved in civil cases.

Second, electronic evidence depends on computer hardware and software. Electronic evidence cannot exist independently; it is created from electronic devices and application software. Electronic data requires an interpreter to allow it to be displayed in a readable format. Users cannot create or manipulate electronic data without the appropriate hardware and software.

1 This non-exhaustive list of electronic data is provided in the amended Civil Evidence Rules dated 25 December 2019 of the People's Republic of China (PRC).

Third, electronic evidence can easily be copied, distributed, changed, updated, or deleted (being deleted in the electronic environment does not mean being completely expunged but can still be restored) (MASON & SENG, 2017, p. 25). The advent of the Internet and computers allows data to be created and exchanged in enormous volumes, for example, in emails, websites, and electronic messages. Email software automatically creates copies of emails as they are sent and forwarded. Web pages can be automatically saved as cached files. Additionally, most systems are backed up daily, so copies of all files on the system are backed up. When computers are networked together, an electronic document can be transmitted and multiple copies distributed around the world in an extremely short period of time, even in real time.

Fourth, electronic evidence is capable of containing a large amount of information and, if preserved properly, being stored perpetually. Electronic evidence can be stored by courts, on mobile devices (memory cards), servers, backup systems, or other places for data storage (e.g. the cloud). If paper evidence can be easily destroyed physically, destroying electronic evidence is much more difficult as it does not merely equate to deleting data on a computer's hard drive. Whenever a file is stored on a computer system, the computer keeps an index of the file's location on the file storage system so that when a user retrieves the file, the computer looks up the file's location in the index and knows from which area on the hard drive to get the file. When a user 'deletes' a file, the computer system removes the file reference from the index. Therefore, if the user then tries to retrieve the file, the computer does not have the reference or the files and cannot retrieve it. This means that the data for that file remains on the computer system's hard drive, and the space occupied by that file can now only be overwritten by other data. Therefore, 'deleted' data can still be retrieved by a computer expert. Electronic data can be recovered long after it was deemed 'deleted' (MASON & SENG, 2017, pp. 9-10).

Fifth, electronic evidence, especially electronic documents, contains metadata. Metadata is a form of data that describes data; it is data about data (MASON & SENG, 2017, p. 27). Metadata refers to “electronic information about other electronic data, which may reveal the identification, origin or history

of the evidence, as well as relevant dates and times.” (Council of Europe, 2019, p. 7). Specifically, it is information that describes data and its context, helping us organize, find, and understand data. Metadata titles and descriptions include, among others, tags and categories, who created a file and when, the time of last modification, who can access it, and who can update it. Metadata is a key factor in verifying electronic evidence. Metadata is used by the file system for system administration tasks and to create, process, transmit, and store data within the system. This metadata can contain a great deal of information about a document itself which would not be visible if the document were printed.

3. THE DEVELOPMENT OF VIETNAMESE LAW AND JUDICIAL PRACTICE ON ELECTRONIC EVIDENCE IN CIVIL LITIGATION

Electronic evidence is a new concept that was introduced to Vietnam only two decades ago with the arrival of e-technology and the birth of e-transactions. In this Part, the author traces the development of Vietnamese electronic evidence law through three stages: from 2005 to 2015, from 2015 to 2022, and from 2023 to present. These stages are marked by important legislative milestones: the first Law on Electronic Transactions of 2005, the Civil Procedure Code of 2015, and the new Law on Electronic Transactions of 2023. By analyzing this legislation and selected cases involving electronic evidence, the author identifies gaps and limitations of current Vietnamese law.

3.1. From 2005 to 2015

Electronic evidence law in Vietnam did not come into existence until the country's first Law on Electronic Transactions (LOET) was enacted in 2005. In line with the global trend, this Law, for the first time, recognizes electronic evidence as a source of evidence. The Law governs e-transactions in the operations of state agencies and in civil and commercial activities. It does not provide a definition of electronic evidence, but defines the term “data message.”

According to Article 4.12 of the LOET 2005, “A data message is information that is created, sent, received and stored electronically...”. With the technical assistance of international experts during its drafting process, the LOET 2005 embraces the global view that electronic evidence is a form of evidence and its evidentiary value cannot be denied based on its form of existence. Article 14 of the Law further sets forth certain factors to assess electronic evidence as follows:

- “1. A data message cannot be denied as evidence on the sole ground that it is a data message.
2. The evidentiary value of a data message is determined based on the reliability of the manner in which the data message is generated, stored, or transmitted; the manner of ensuring and maintain the integrity of data messages; the manner in which the originator and other relevant factors are identified.”

At the time the LOET 2005 was enacted, e-transactions were uncommon to the general public as well as the judiciary. The then-current CPC of 2004 did not contain any provision directly governing electronic evidence, but audio and video recordings, including those created by electronic means, could be admitted if they were presented together with documents certifying their origins or documents related to such audio or video recordings². Traditional sources of admissible evidence under the CPC 2004 include readable documents, objects, party testimonies, witness testimonies, expert reports, judge’s on-site examination reports, property appraisal reports, and other sources prescribed by law. In fact, during the first years after the LOET came into effect, courts frequently encountered cases in which they had to assess new types of evidence such as emails and text messages, but due to a lack of understanding of the LOET and lack of concrete guidelines, judges admitted or rejected emails or text messages on a discretionary, if not arbitrary, basis. Courts generally admitted emails as evidence in commercial contract disputes if the parties had no objection regarding the authenticity of such emails³. Sometimes, however, courts rejected emails as evidence without sound

² Article 82 of the CPC 2004 of Vietnam.

³ For example, Judgment No. 1044/2012/KDTM-ST of the Municipal People’s Court of Ho Chi Minh City, Vietnam (in Vietnamese, on file with the author).

reasoning; they even showed their misunderstanding of the LOET provisions in their decisions.

For example, in 2012, a provincial-level court in Hanoi City dismissed a case concerning a sale of goods contract dispute due to inadmissible electronic evidence⁴. In this case, the seller, a Swiss company, sued the buyer, a Vietnamese company, for breach of the buyer's payment obligation, claiming 2.2 million USD. The plaintiff alleged that the parties did not sign any contract, but the sale and purchase were conducted through electronic purchase orders and email correspondence between the two parties. After accepting the case, the judge requested the plaintiff to submit additional evidence within 7 days, including (1) documents proving that the defendant had placed the order, which must be original documents or certified copies; (2) proof showing that the defendant had received the goods; and (3) electronic transaction documents must have a certification of the originating source, certification of electronic signatures, and the transaction must be conducted by the legal representative or authorized agent of the parties. Subsequently, the plaintiff submitted bills of lading which were printed from the plaintiff's computer abroad, certified abroad, and legalized by the appropriate consular, but submitted no documents showing the defendant had placed the order or received the goods. In fact, the plaintiff submitted the printouts of the purchase orders, invoices, and emails between the two parties, and claimed that this was a valid e-transaction in accordance with the LOET. Unfortunately, the court cited Article 5 of the LOET stating the general principles of conducting e-transactions, particularly, the principle of freedom of agreement on the selection of technology to conduct e-transactions. The court opined that the plaintiff failed to submit evidence showing that the parties had agreed on the technology to conduct the e-transaction, which was the basis to accept the purchase orders, mode of delivery and payment, etc. In its order of dismissal, the court further explained that emails produced by the plaintiff were merely printouts from the plaintiff's computer and were accessed from a server located abroad without certification of the originator; thus, the court had no basis to evaluate those emails, and furthermore, the emails and

4 Decision No. 110/2012/QDST-KDTM of the Municipal People's Court of Hanoi City, Vietnam on the dismissal of commercial case (in Vietnamese, on file with the author).

electronic purchase orders were in the name of an individual, not from the legal entity or the representative of the legal entity. Therefore, the court could not affirm that there had been a sale transaction between the plaintiff and the defendant. This case is a prominent case that shows the court's lack of understanding of electronic evidence and misinterpretation of the LOET. Instead of analyzing the factors to determine the evidentiary value of the emails, the court looked at whether the parties had agreed on the technology to conduct the e-transactions, which was irrelevant.

3.2. From 2015 to 2022

The limited understanding and use of electronic evidence in litigation ensued until the new Code of Civil Procedure (the CPC 2015) was adopted (TRAN, 2022, p. 73). Turning to the second decade of the twenty-first century, when an increasing number of cases involving electronic evidence were brought to court, there was an urgent need for a sound legal basis for electronic evidence. For the first time, the new CPC 2015 added a new source of evidence, i.e. electronic data. The Code does not define “electronic evidence”; instead, it provides a definition of “electronic data message” in reference to the LOET: Electronic data messages are expressed in the form of electronic data interchange, electronic invoices, e-mails, telegrams, telegraphs, faxes, and other similar forms in accordance with the LOET⁵.

The CPC 2015 provides no explicit standards to assess the evidentiary value of electronic data messages. Therefore, the LOET's standards are applied, which consist of three criteria: (1) the reliability of the manner in which the data message is generated, stored, or transmitted; (2) the manner of ensuring and maintaining the integrity of data messages; and (3) the manner in which the originator and other relevant factors are identified.

Subsequently, the Council of Justices of the Supreme People's Court issued Resolution No. 04/2016/NQ-HDTP on 30 December 30, 2016, guiding the implementation of a number of provisions of the CPC 2015 and the Law on

5 Article 95.3 of the CPC 2015 of Vietnam.

Administrative Procedure on sending and receiving complaints, documents, evidence and delivery and notification of procedural documents by electronic means. This Resolution further defines that electronic data messages in civil and administrative proceedings (referred to as “electronic data messages”) are electronic data created, sent, received, and stored by electronic means from complaints, documents, evidence, and procedural documents that have been issued in accordance with the law. This definition is quite narrow and does not encompass various types of electronic evidence in civil cases.

In summary, the current legal framework merely recognizes the evidentiary value of electronic evidence, the principle of non-discrimination between ordinary evidence and electronic evidence, and three criteria determining the evidentiary value of electronic data. The law does not have specific and detailed regulations on the procedure and method of producing, collecting, submitting, preserving, and authenticating electronic evidence. The definition of “electronic data message” in the CPC 2015 does not seem to fully cover new forms of electronic data in the current digital age but rather refer back to the provisions of the LOET, which was enacted ten years earlier.

On 27 September 2018, Decree 130/2018/ND-CP on the implementation of the LOET regarding digital signatures and validation service for digital signatures (Decree No. 130/2018/ND-CP) was adopted, which contributes to the improvement of the legal framework for electronic evidence in Vietnam. Nevertheless, the new Decree is mostly unknown in the judicial sector.

Due to the lack of detailed guidelines, it is challenging for courts to resolve disputes involving common types of electronic evidence such as instant messages, emails, and social media posts. In a civil case decided by the High People’s Court of Da Nang City, a litigant requested the court to provide an expert examination on the authenticity of an instant message through Viber, a popular instant messaging app in Vietnam similar to WhatsApp and WeChat, but no forensic institutions in Vietnam could take this task because it was beyond the ability of their staff and work facilities. The High People’s Court explained in its decision that “Viber is a foreign company providing cross-border services; thus, the personal information of Viber network users is protected

under the security regulations of the service provider”⁶. In another case involving a sale contract dispute, the court did not admit emails submitted by the defendant because those emails were written in a foreign language, had not been translated into Vietnamese, and had not been certified according to the CPC; the identity of the sender and the relationship between the sender and the defendant were unclear⁷.

For content posted on social media, Vietnamese courts’ approaches are divided. Some courts accept social media posts as evidence, but other courts reject them because the identity of the social network user cannot be verified. For example, in a civil case on tort liability for defamation, the first instance court granted relief for Ms. K, the plaintiff, and ordered Ms. H, the defendant, to make a public apology to K in the commune where K resided and worked, and to publicly rectify the content related to K that H had posted on H’s Facebook page with the statement: “H’s posting information related to K on H’s Facebook page on 25 April 2017, along with the comments, without the consent of K, has caused harm to the K’s reputation and dignity; infringing upon citizens’ right to private life, personal secrets, and family secrets”⁸. It can be seen that in this case, Facebook posts were admitted by the court as evidence to show that H had caused harm to K’s reputation and dignity and infringed upon K’s right to private life, personal secrets, and family secrets. Nevertheless, in another case on tort liability for defamation, the court refused to admit Facebook posts as electronic evidence to resolve the factual dispute between the parties⁹. In this case, the plaintiff, Kindergarten H, provided evidence produced by the bailiff’s office in Thu Duc District, which was an official document certifying that there was a post by a Facebook user named “H N” as follows: “Those who have kids studying at Kindergarten H should be careful that the school is using well water near the cemetery for the kids”. Because the plaintiff failed to prove that the defendant, Mr. Nguyen Huy H, was the one who created and used the Facebook account

6 Judgment No. 02/2019/DS-PT dated 11 January 2019 of the High People’s Court in Da Nang City, Vietnam (in Vietnamese, on file with the author).

7 Judgment No. 20/2019/KDTM-PT dated 12 August 2019 of the Provincial-Level People’s Court of Binh Duong Province, Vietnam (in Vietnamese, on file with the author).

8 Judgment No. 43/2017/DS-ST dated 26 September 2017 of the District People’s Court of Tanh Linh District, Binh Thuan Province, Vietnam (in Vietnamese, on file with the author).

9 Judgment No. 735/2019/DS-PT dated 21 August 2019 of the Municipal People’s Court of Ho Chi Minh City, Vietnam (in Vietnamese, on file with the author).

“H N” to post this content, the Court ruled in favor of the defendant. No metadata was examined and no expert was involved in this case.

Regarding emails, courts also lack specific guidelines to assess their authenticity and totally depend on the relevant authority. For instance, in a sales contract dispute, the plaintiff submitted emails exchanged between the two parties from February to December 2014 to prove its case. The emails were all printed on paper and presented by the plaintiff to the court. However, the emails that the plaintiff cited did not contain the electronic signature of the sender. Based on the Court’s request for expert examination, the Institute of Forensic Science in Ho Chi Minh City issued an expert examination report stating that there was not sufficient basis to confirm the authenticity of the content, sender, recipient, and sending time for 13 files containing the content of the emails that needed to be examined. Meanwhile, the defendant did not confirm the content and the sender of these data messages. Citing the LOET 2005, the court ruled that the emails in question had no evidentiary value to prove the plaintiff’s claim, and therefore, the plaintiff’s claim was denied by the court.

In another case concerning electronic evidence comprising emails exchanged between the parties¹⁰, the court again denied the evidentiary value of emails, citing the following reasons: (i) most emails were in English and were translated by the plaintiff himself without certification; (ii) the emails did not clearly show the time of receipt (the time when the data messages were entered into the designated information system); and (iii) any person extracting email data from a computer could easily reset the date and time of the computer system.

From the aforementioned cases, it can be seen that Vietnamese judges and parties to civil cases have difficulties in collecting electronic evidence as well as evaluating the reliability and authenticity of electronic evidence due to a lack of concrete standards for authentication. The fourth case on emails could have been resolved by using a timestamp certification service. In civil litigation, the parties bear the burden of proof despite possibly lacking the necessary knowledge and skills to properly deal with electronic evidence. They are only

10 Judgment No. 10/2021/LD-PT dated 22 November 2021 of the High People’s Court of Ho Chi Minh City, Vietnam (in Vietnamese, on file with the author).

familiar with the traditional types of evidence, particularly paper documents. Therefore, it is crucial that the law provide clear and specific provisions for collecting, preserving, producing, and evaluating electronic evidence to guide the parties to fulfill their burden of proof, and also to guide judges to handle cases involving electronic evidence in a sound and consistent manner. At present, the CPC 2015 and the Supreme People's Court's regulations are silent on the common forms of electronic evidence, the procedure to collect, preserve and authenticate electronic evidence, and the standards for evaluating electronic evidence. When handling disputes relating to electronic contracts, some courts even require the parties to print all electronic invoices in thousands of transactions with customers to submit to the court with an enormous volume of printouts. This is not only a waste of resources but also cause for skepticism among the parties on the court's ability to examine all of those printed documents.

3.3. The new Law on Electronic Transactions of 2023

To further facilitate e-transactions, including the use of electronic evidence in civil proceedings, the new LOET was passed by the National Assembly of Vietnam in June 2023. The new Law contains 33 revised articles and adds 18 new articles compared to the LOET 2005, making notable amendments to the existing Law as follows:

First, the LOET 2023 has a broader scope of application. It governs e-transactions conducted by actors in all sectors, be they enterprises, individuals, or Vietnamese government bodies. This is a significant change compared to the LOET 2005, which excludes certain transactions such as the issuance of land use right certificates, real estate ownership certificates, inheritance documents, marriage certificates, decisions on divorce, birth and death certificates, bills of exchange, and other important documents.

Second, the LOET 2023 adds several new provisions on the validity and value of data messages while retaining the general provisions of the LOET

2005 as mentioned in Section 3.1. The new Law details that a data message can be created by converting a paper document into a data message, and such data message must have a specific marking to confirm that it has been converted from paper document and information of the person conducting the conversion. The Law also stipulates that if a paper document must be notarized, a data message can satisfy such notarization requirement if it satisfies the requirements of the law on notarization. The provision seems to pave the way for electronic notarization in Vietnam. Moreover, the LOET 2023 provides a clearer mechanism to determine when or where a data message is sent or received.

Third, the LOET 2023 provides a more specific classification of electronic signatures, including three categories: (i) specialized electronic signatures, which are used by organizations for their private operations; (ii) public digital signatures, which are used for “public activities” and secured by an electronic certificate confirming the public digital signature; and (iii) specialized digital signatures for official use. An individual may not be able to create and use his or her own e-signature and may have to use digital signature for his or her e-transactions.

Fourth, the LOET 2023 for the first time introduced trust services, including timestamp issuance service, data message certification service, and public digital signature certification service. Trust service providers must be licensed by the Ministry of Information and Communication of Vietnam.

The foregoing new provisions of the LOET 2023 clearly provide a more detailed legal framework for electronic evidence in Vietnam. However, because the Law applies to all types of e-transactions, at present, detailed rules on collecting, preserving, authenticating, and evaluating electronic evidence in civil litigation are missing. The LOET is highly technical and complicated legislation which is difficult for judges to understand and apply correctly. It is essential that there be a separate set of rules or regulations on electronic evidence in civil proceedings to provide clear, specific guidelines for courts in Vietnam. For example, the guidelines should clarify: in what manner and method can parties submit electronic evidence to the court? Do they have to print out all electronic

data, or what are the alternatives? Can screenshot images of an SMS chain be submitted? Can parties submit a drive containing electronic files? Should a court accept data messages stored in a blockchain? A number of issues need to be addressed in a separate regulation on electronic evidence. The general and technical rules of the LOET are not sufficiently helpful for courts to deal with a new, non-traditional type of evidence like electronic evidence. Therefore, even with the new LOET 2023, it can be said that the existing legal framework for electronic evidence in Vietnam is incomplete and has not met the demand of the new era under the profound impact of Industry 4.0.

4. CHINA'S LAW ON ELECTRONIC EVIDENCE IN CIVIL CASES AND EXPERIENCE FOR VIETNAM

During the last five years, China has positioned itself as a rising power in shaping online litigation laws, including the law of electronic evidence, in order to satisfy the high demand of civil justice as a result of its giant digital economy.

Vietnam can look to neighboring China's experience in rapidly improving the legal framework for electronic evidence in civil proceedings in order to meet the demand of Industry 4.0. China first recognized electronic evidence in civil cases in its amended Civil Procedure Law in 2012 (GUO, 2023, p. 1). On 25 December 2019, the Supreme People's Court of China issued the amended Civil Evidence Rules, which came into force on 1 May 2020. The amended Rules tackle the problem of lacking detailed guidelines with respect to the scope and form of electronic evidence and how it must be presented in civil proceedings. For example, Article 15 of the amended Rules provides for the best evidence rule for electronic evidence in civil cases (GUO, 2023, p. 12) by clarifying that electronic data shall be presented in its original form, and the following are sufficient to satisfy the "original form" requirement: (i) a copy identical to the original made by the producer of the electronic data; (ii) a printout of the electronic data; or (iii) any other output medium directly derived from the electronic data that can be displayed or identified. This provision

solves the long-lasting uncertainty regarding the requirement for original evidence set forth in the Chinese Civil Procedure Law.

Article 93 of the amended Civil Evidence Rules provides a list of factors that Chinese courts may take into consideration in determining the authenticity of electronic data, such as the level of integrity and reliability of the hardware and software environment; its operating condition; and the methods by which the electronic data were generated, stored, extracted and transmitted, etc. These factors have in essence been provided in the LOET of Vietnam, but China goes further by stipulating that under certain circumstances, Chinese courts may presume the authenticity of electronic data unless there is evidence to the contrary (GUO, 2023, p. 12). Such circumstances include where: (i) the electronic data is submitted or kept by a party and said data is unfavorable to that party; (ii) the electronic data is submitted or confirmed by an independent third party platform that records or retains the data; (iii) the electronic data is generated from the ordinary course of business; (iv) the electronic data is stored in archives; (iv) the electronic data is stored, transmitted and extracted in accordance with the manner agreed by the parties, and (vi) the contents of the electronic data have been notarized by a notary public. These detailed guidelines are missing under Vietnamese current law. That is why the courts in Vietnam face difficulty in accepting or rejecting the evidentiary value of common types of electronic evidence like emails and Facebook posts.

Based on China's experience, Vietnam should provide in timely fashion more detailed and specific guidance for courts as well as litigants on the collection, submission, preservation, and authentication of electronic evidence in civil cases, taking into consideration newly emerging technologies, including blockchain. The Supreme People's Court of Vietnam should take charge like its Chinese equivalent to formulate rules and guidelines to help the lower courts in dealing with electronic evidence based on international experience and best practices.

5. CONCLUSION

Over the course of its development and consolidation, the European Union (EU) has evolved and refined its regulatory framework to become a prominent economic bloc and unified market. The EU's influence extends beyond the Brussels Effect, encompassing various legislative mechanisms such as extraterritoriality, territorial extension, and cooperation through treaties and bilateral or multilateral agreements.

While the Brussels Effect is subject to specific requirements, whether de facto or de jure, the EU has employed a range of legislative instruments to assert its normative influence. These efforts have led to the creation of agreements and ongoing negotiations, exemplified by the Forest Law Enforcement, Governance, and Trade (FLEGT) program. Multiple countries have aligned with certifications under the EU Timber Regulation (EUTR), and discussions within Brazil regarding the EU regulation on products free of deforestation (EUDR) are already in progress.

A noteworthy observation is the trend towards regionalization in international environmental law. The federal sphere is increasingly ceding its role to engage in direct cooperation with states, with the state of Mato Grosso serving as an example. Mato Grosso's expressed interest in the Voluntary Partnership Agreement (VPA), evident in legislative bills, legislative assembly session minutes, and meetings with the forestry business sector, demonstrates this shift.

Cooperation also extends to the implementation of Brazilian policies and structural mechanisms. In some cases, these mechanisms may require additional funding to effectively address the de jure effect of Brussels. The complex nature of the Brussels Effect, with its five requirements, makes it challenging to definitively prove its presence in the forest products policy.

Negative consequences of this influence include market uncertainty, trade disruptions due to new bureaucratic requirements, the displacement of non-certified forest products, exacerbation of the North-South disparity, the

potential opening of new areas, and an increase in greenhouse gas emissions. However, concurrently, a global forestry order is gradually emerging, highlighting the importance of establishing legal standards that align trade with the sustainable practices of this system. Changes in production and consumption patterns underscore the impact of this system, as evidenced by the federal bill's reference to the FLEGT monitoring system. The success of policy implementation hinges on extensive cooperation among the involved countries during the policy structuring process.

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